Characterization Of The Virulence Factors Of Candida krusei

Hafiz A., A. R. Fathilah, and W.H. Himratul-Aznita

Department of Oral Biology, Faculty of Dentistry, University of Malaya, Kuala Lumpur.

Objectives: The purpose of this study was to evaluate the consequences of phenotypic switching generation towards adherence; susceptibility towards chlorhexidine (CHX), and growth profile of each of the switched Candida krusei generations. Methods: Four generations of phenotype switched Candida krusei and pure ATCC 14243 Candida krusei were subcultured from glycerol stock. Samples were evaluated for the adherence ability by using the NAM model. Disk diffusion test, Minimum Inhibitory Concentration (MIC) and Minimum Fungicidal Concentration (MFC) assay were carried out using CHX. The effect of the CHX on the growth profile of all switched generation of Candida krusei was also being carried out according to the standard procedures. Results: The adherence test showed the 2nd generation Candida krusei had the highest adherence in saliva coated glass beads. Furthermore, the second generation of Candida krusei has shown to be the least susceptible towards CHX compared to other generations. Under the influence of CHX, the 2nd generation of Candida krusei showed the fastest growth during the log phase and the earliest to reach the stationary phase compared to the other generations. Conclusion: The 2nd switched generation was found to be the most virulent stage compared to the other 3 generations.